WHAT IS COVID-19?

Coronavirus disease 2019 (COVID-19) is a respiratory illness that can spread from person to person. Patients with COVID-19 have experienced mild to severe respiratory illness, including fever, cough and shortness of breath. The virus that causes COVID-19 is a novel (new) coronavirus. It is not the same as other types of coronaviruses that commonly circulate among people and cause mild illness, like the common cold.

HOW DOES COVID-19 SPREAD?

The virus that causes COVID-19 is thought to spread mainly from person-to-person, between people who are in close contact with one another (within about 6 feet) through respiratory droplets when an infected person coughs or sneezes. It may be possible that a person can get COVID-19 by touching a surface or object that has the virus on it and then touching their own mouth, nose or possibly their eyes, but this is not thought to be the main way the virus spreads.

BACKGROUND INFORMATION ON TREATMENT

Recommendations for the treatment of patients with COVID-19, the disease caused by the SARS-CoV-2 virus, are evolving. This document is designed to update healthcare staff working in intensive care units (ICU) on current recommendations and is based on published guidelines as well as expert opinion and feedback from critical care units currently caring for COVID-19 patients.

Different regions of the world are reporting different case fatality rates and ICU utilization. This variation may be explained by different SARS-CoV-2 strains or differences in testing and reporting. We have learned that being older (median age ~60 years) or having comorbid conditions (~40%) such as diabetes or cardiac disease increases probability of ICU admission.

ICU MANAGEMENT OF PATIENTS

ICU management of patients with COVID-19 is similar to management of patients with viral pneumonia with a few important considerations which are subject to updates by the CDC:

- Admit COVID-19 patients to private rooms and always keep them 6 feet apart during transfer
- Cohort COVID-19 patients and providers as possible to minimize use of PPE and prevent spread
- Restrict visitors to areas with COVID-19 patients to staff only
- Use droplet face masks for staff during assessment and transfer of symptomatic patients
- Wear airborne isolation precautions including eye-protection while caring for patients during aerosol-generating procedures (intubation, bronchoscopy, open-suctioning of airways); These procedures should take place in negative airflow areas
- Avoid use of high-flow nasal oxygen or non-invasive ventilation due to risk of aerosolization of the virus; consider early intubation to “close the circuit”
- Favor meter dosed inhalers over nebulizers for intubated patients to keep circuit closed
- Require education on proper use of personal protective equipment (PPE) for all staff
- Consider risks and benefits of steroids in patients who develop ARDS; more information is available at https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2763184
ANTIVIRAL AND IMMUNOMODULATORY THERAPIES

To date, there are no specific recommendations for antiviral or immunomodulatory therapies. Several antivirals such as remdesivir and lopinavir/ritonavir are undergoing clinical trials, as well as other agents such as vitamin C and the anti-ILC tocilizumab.

FURTHER INFORMATION

The worst-case scenario for ICU patients is progression to the acute respiratory distress syndrome (ARDS). Use lung-protective ventilation strategies and conservative fluid management. Consider empiric antibiotics for concomitant bacterial pneumonia. Treat with prone positioning for PaO2:FiO2 <150 and utilize ECMO as resources allow. Facilities should ensure an allocation plan in the event ventilators or rooms become scarce. Continue to work with local and state planners for contingency planning in the event of breach of surge capacity.

ADDITIONAL INFORMATION

The Indiana State Department of Health has set up a dedicated provider telephone line that is available 24 hours a day, seven days a week. Please refer to IHAN distributions for the number.

Additional information and resources for COVID-19 are available at the links below.

- ISDH COVID-19 webpage: https://in.gov/coronavirus

2 https://jamanetwork.com/journals/jama/fullarticle/2762996
3 https://jamanetwork.com/journals/jama/fullarticle/2761044